

AMERICAN VETERINARY REVIEW,

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ORIGINAL ARTICLES.

THE HORSE'S FOOT.

BY A. ZUNDEL.

(Continued from page 200)

CARTILAGINOUS QUITTOR—*Continued.*

The operation includes two principal steps : first, the removal of the part, or the whole, of the wall corresponding to the diseased cartilage ; and second, the extirpation of the cartilage itself. The opinions of surgeons vary as to the amount of hoof which should be removed, and the extent of horny tissue to be taken off. In respect to the length of the superior border of the portion requiring removal, it is generally agreed that it must extend from the anterior extremity of the cartilage backward, that is, the two posterior thirds of the space reaching from the toe to the heels, or one-third of the circumference at the coronary band. But opinion continues divided as to the lower border. Lafosse, Senior, left it longer than the superior, and made the direction of the division of the groove correspond to that of the fibres of the hoof. Lafosse, Junior, accepting the idea of Solleysel and of Dieterichs, did not reach the sole with its groove, and removed only a portion of hoof parallel to the coronary band. Renault prefers crossing the fibres of the hoof with the groove, and brings the lower end of it to one-half the

dimensions of the upper border, its groove running backwards. Rey considers that to be running too far back and too near the heel, and recommends the groove to be so made that the lower border will have the same length as the upper, and for that reason advises that it be as nearly parallel as possible with the line of the heels. Lafosse, Senior, removes too large a portion of the hoof. Lafosse, Jr., leaves a portion of hoof which not only is useless, but which interferes with certain steps of the operation, when with the double sage knife, the skin is separated from the external surface of the cartilage, and also, when this is removed; and again, there is a separation between the severed portions of the quarters much greater than occurs in the process of Renault, which, like that of Rey, exposes the entire cartilage, and greatly facilitates the operation.

It is to be understood that the foot has been prepared; that the hairs have been clipped over the skin covering the cartilage; that the sole has been pared thin, down to the blood, as well as the bar corresponding to the diseased cartilage, so that the quarter has been allowed to project below the sole, to facilitate its eversion. The foot has been, moreover, well prepared by two or three days of poulticing, to render the hoof easier to be cut by the instrument, and the operation easier to perform, and therefore shorter in its various steps, besides placing the patient in the best condition for the endurance of so serious an operation.

After casting the animal upon a good bed, and fixing the feet, placing a temporary tremoslater with a strong cord, similar to a tourinquet, around the coronet, a groove is made, using various sized drawing knives, running from the anterior angle of the lower border of the cartilage downwards to the sole, following the direction recommended by Lafosse, Senior, Rey or Renault. This groove, made first with the widest, and finished with the narrowest of the drawing knives, must not touch the podophyllous tissue, and still must run through the entire thickness of the wall, without producing hemorrhage. In this step of the operation, as Girard correctly observes, short cuts of the knife are always better and quicker than those made by scraping or dragging with the instrument. It is also important to come down to

the soft tissue at the coronary band first, and successively downwards to the inferior border of the wall, as otherwise, as the instrument is moved from above downwards, with a certain amount of force, it might slip and cause a serious division or laceration of the podophyllous tissue. The separation is then made of the wall from the sole by another groove, extending from the end of the groove already made, on the quarter, back to the heels. This is done without difficulty, with a small drawing knife, when the foot has been properly prepared. There is, however, one point which usually offers more or less resistance when the quarter is removed. It is that where the wall is continued to the bars. This resistance is sometimes so considerable, that if much traction is made, the wall will break more or less in front of the heels, where it is comparatively thin, and it may consequently become necessary to remove, by itself, the portion which has remained attached. This little accident, however, can be avoided by ascertaining certainly before the extraction of the wall is effected, that the continuity of the wall and bars has been cut off. This being the case, the complete separation of the wall from the sole is made by running the sharp edges of the double sage knife through the structure of the living tissue underneath. The retraction of the quarter can then be proceeded with.

For this purpose a properly constructed lever is carefully introduced into the groove before mentioned, at the wall and sole of the foot. The inferior and anterior angle of the hoof at this point being then carefully raised, an assistant grasps it with the nippers, turning it back, tears it slowly, while the surgeon, with such a motion of the lever as may be necessary, assists in the tearing off of the portion of the quarter requiring removal. If adhesions remain, interfering with this manipulation, they are removed by cutting with a sharp instrument. As this separation of the wall reaches about to the coronary band, the separation is very easy, and no fear of lacerating the soft structures need be entertained. Care is necessary at this step, however, to avoid injuring the coronary band and the podophyllous tissue; to prevent which it will be prudent on the part of the assistant to press upon the band as the separation takes place.

This being accomplished, the edges of the wound are carefully examined; any projections remaining are removed, and the blood is sponged off. The double sage knife is then carefully plunged, with the convexity turned upward, (that is, towards the skin) between the external surface of the cartilage and the internal face of the skin, below the border of the coronary band, and then carried forward and backward, or as required, until the separation between the skin and the cartilage is completed, and the entire external surface of the cartilage is exposed. In moving the instrument backwards, it is necessary to be very cautious, especially while carrying the sharp edges downwards and inwards, in order to avoid injury to the coronary band and the skin, of which, however, there can be but little danger, when the knife is carefully held and properly directed. The succeeding step is to separate the skin from the cartilage; it is to be carefully raised and separated from its attachments underneath, which is sometimes a process quite difficult to accomplish, as the skin has always become more or less tumefied, and therefore has lost much of its natural flexibility and suppleness. Some operators, in order to avoid these difficulties, and overlooking the functions of the coronary band, cut it and remove it, with those portions of the skin which cover the cartilage. Others, more conservative, (Herting for example) cut it only through the middle, until they reach the superior border of the cartilage, and then, raising the two flaps of the skin, accomplish the same result with less cutting.

The destruction of the principal organ of the secretions of the hoof having been involved in the first method, and having now taken place, it can never be restored to a healthy condition, and the animal continues to be exposed to the frequently serious complications of "false quarter." By the second method, the production of a new wall is nearly always accompanied with the formation of a "quarter crack." The recovery is slow in either case, and more or less deformity is likely to follow. It is, then, the better and wiser plan to employ the mode of separation of the skin from below, and to avoid the division of the coronary bands or of the teguments.

The next step is the removal of the cartilage altogether. This

is done with the single sage knife, held firmly in the hand, either the left or the right, always, however, that corresponding to the side of the heel to be operated upon. Taking a point of rest with the flat of the thumb upon the plantar surface of the foot, the instrument is pushed between the skin and the cartilage, and the sharp edge turned backwards, with a firm rotary motion, downwards and forwards. The detached portion of cartilage is then seized with a pair of bull-dog forceps, and brought outwards, and the sage knife is brought forwards, downwards and outwards, from under the cartilage. It is a good plan, in order to make more room for working, to raise the skin and coronary band with a blunt tenaculum. The operation should always be commenced at the posterior part, in order to avoid the articular synovial capsules, which might be opened if the removal of the cartilage were begun forward. As the operator reaches the anterior part of the cartilage, which is situated almost over this capsule, it is prudent to hold the foot in excessive extension and thus avoid injury to the capsule. This is an important point to consider in the operation. The sharp instrument being carefully handled, every portion of the cartilage is taken off, either at once or by layers successively, until the whole is removed. It is thus accomplished in three or four pieces. In some instances the anterior portion is cut off by a longitudinal incision, made with a straight bistoury, following the direction of the posterior face of the coronet; the object, in this case, being simply to render the operation easier. The cartilage is thus removed, great care being taken to avoid opening the capsular articular bursæ. It is essentially necessary to remove the whole of the diseased tissues, in order to bring the parts into the condition of a simple wound. Still there need be no alarm if some small portions remain, more fibrous than cartilaginous, which, deep as they are, may protect the synovial capsules or the ligament; and moreover, they often slough off by themselves, with the abundant suppuration which follows.

To operate with the greater facility, it is well to have two forms of sage knife, one right and one left-handed, and some of extra strength, with which to remove the larger particles of

cartilage, the others being small, thin and light, being adapted to the more careful dissection necessary towards the lateral ligament, and about the synovial bursæ of the joint.

Towards the end of the operation, the surgeon will, with the finger, carefully explore the condition of the parts, to assure himself that the cartilage is entirely removed; that the articular synovial sac has been preserved intact; that the ligament of the joint remains perfect; and that the parts are well washed and ready for the dressings. Although in the absence of possible complications, the operation is now finished, it may yet be followed by some serious sequelæ, which we will next consider.

(To be continued.)

GLANDERS IN ILLINOIS.

(Reprint from the Report of the Illinois Board of Health.)

A few days prior to the last meeting of the Board the first information concerning what has since proven to be a wide-spread outbreak of glanders was received. As detailed in my report at that meeting, State Veterinarian Paaren was specially commissioned under the authority of the Board, and after consultation with the Governor, to visit the infected localities and institute the necessary measures for the suppression of the disease. In each case he was furnished a letter of instruction, in which, after informing him of the reported locality, he was authorized, in the event that he found the report well founded, to aid the local health authorities—town, board or county commissioners, as the case might be—by giving all needed directions and advice concerning the destruction of animals actually suffering with the disease; the quarantine of those that had been exposed; and the disposition of infected property, such as buildings, harness, halters, stable utensils, fences, sheds, hitching-posts, watering-troughs, &c. He was also requested to furnish a detailed report of the state of affairs as found in each locality, and a statement of his action. Up to the middle of June he had thus visited infected localities in White-side, Perry, Jackson, Piatt, Ford, Livingston and McLean coun-

ties, at a total expense to the board of \$212.13, which amount will be a charge upon the contingent fund for the suppression of epidemic contagious diseases, this use of the fund having been promptly approved by the Governor. So far as it is possible to judge at this date the results of the work thus far done have been successful.

The text of Dr. Paaren's report on the Genesee township (Whiteside county,) outbreak is herewith submitted.

OFFICE OF STATE VETERINARIAN, }
Chicago, Ill., April 17th, 1883. }

JOHN H. RAUCH, M. D.,

Secretary Illinois State Board of Health.

DEAR SIR :—In accordance with the request of the State Board of Health, dated April 11th, 1883, that I report to the Board of Health of Genesee Township, Whiteside County, Illinois, I have the honor to lay before you the following statement, embodying the result of my visit to that place :—

On April 13th, together with Dr. Trumbower, veterinary surgeon, of Sterling, Illinois, I left for Coleta, distant about thirteen miles from Sterling. I there met in consultation two members of the Board of Health of the Township, W. C. Hurless, esq., justice of the peace, and S. S. Cobb, esq., clerk of the township; the third member of the said board being absent from Coleta.

The infected farm of the late Wellington Conaway, distant about a mile and a half from Coleta, was visited the same afternoon. While all the dwellings and outhouses on the farms for miles around bear evidence of prosperity and good taste, the dwelling and outhouses of the Conaway farm, long before it was reached, were remarkable by a very conspicuous contrast to all the others.

On one side of the public highway, and about seventy-five feet distant from the latter, stands a dwelling, two stories high, and covering a space of about 25x60 feet, the length of the building being parallel with the highway. The floor of the building is raised about two feet from the surrounding surface, and there is a cellar underneath, full of putrid and decaying animal and vegetable matter, skeletons of hogs, dogs, etc., evidently the accumulations of years. A strong, penetrating, indescribable odor per-

vades the dingy and filthy rooms in the house, in spite of a very recent sham performance of disinfection with chloride of lime, which was said to have been sprinkled here and there, but perhaps only in the room that was occupied by the deceased father and son during their brief illness. The adjacent rooms, and the rooms up stairs, were occupied by the widow and about half a dozen children of both sexes, varying from about six to over twenty years old.

The dwelling is one of the old landmarks of the township, being upwards of forty years old, and it has evidently for many years back received no other repairs than such as were most necessary to ward off the worst of wind and wet, evidenced by rude and clumsy patching here and there, the weather-boards being disarranged and loose everywhere.

Along the highways, on both sides, is what in former days was a picket fence, but now only partly represents such a structure, half of it being down and all of it rotten, and the posts and remaining railing bearing evidence of having been used for hitching horses, who, with their teeth, have rendered it still more unsightly and useless.

Opposite the dwelling-house, on the other side of the public highway, and close to the same, is the stable, a rude structure of common boards, and about twenty-five by fifty feet, having, under an extension of the roof, on both sides, space for grain, &c. The stable has a sort of ceiling of loose rafters and boards, on which is placed a small quantity of hay and rubbish, and the shingled gable roof is about twenty-five feet high from the ground. There are five stalls with mangers, the construction of which is in keeping with the building.

In the stalls were five horses of various ages, and in moderately fair condition, as to flesh; otherwise they were dirty and rough looking. One by one they were led outside for inspection, and were found to be suffering with glanders in various stages of development.

After returning to Coleta, in the evening, I advised the Town Board of Health to send a constable with a written notice to the widow of the late Wellington Conaway, informing her that, under

penalty of law, she was from that moment and until further orders, prohibited from removing any of the said five horses, as well as six other horses, kept elsewhere on the farm.

On the morning of the following day, April 14th, together with the aforesaid two members of the Town Board of Health, and Dr. Trumbower, V. S., I visited a number of farms in the neighborhood around the Conaway farm, for the purpose of inspecting all the horses, as they were feared to have been more or less in contact with the horses on the infected farms. I also inspected several horses owned by various parties in the town of Coleta. The horses on the Conaway farm had been running at large for some time, and some of the neighboring farmers, while visiting Wellington Conaway and his son George, during their sickness and attending their funerals, had been in the habit of hitching their horses to the fencing above mentioned, and, consequently, reasonable fear was entertained as to their being tainted with the disease. The result of this inspection will be found stated below.

Thereafter the Conaway farm was revisited. On my recommendation, proper disinfection of the dwelling-house was entrusted to George W. Remage, M. D., of Coleta, and this gentleman accompanied us to the farm. The widow was inclined to resist all of our proceedings. I quietly informed her that I was present on behalf of the State Board of Health, and that our mission was one of peace. I also stated that in order to accomplish proper disinfection of the premises, it was necessary that the family move away temporarily, and that the town supervisors would accommodate her and her family. A volley of abuse and invectives was the reply; and she was then told that she should move peaceably, if possible, but forcibly, if necessary. After listening to the advice of Wm. C. Hurless, justice of the peace and member of the Town Board of Health, who, during her husband's life had been his counsellor and adviser, she relented and consented.

When, therefore, the stable was entered, the best one of the five horses was missing. It was suspected that the oldest son, about 20 years old, had taken away this horse; but the whole family pretended to know nothing about it. Being informed that a warrant for his arrest would be forthwith issued, the above-mentioned

son went quietly away, and, after an hour's absence, brought the horse panting and sweating as after a hurried run.

Five good, true and disinterested farmers and tax-payers, had been selected in the morning. They were now sworn in by the justice of the peace, and proceeded to put a valuation on the following property, which I had advised to be destroyed, viz:

Two horses and three mares, (one of these in foal;) the stable containing the horses; about eight hundred feet of fencing, railing, boards and pickets, being about four hundred feet along each side of the road, and also the fencing around the barn-yard; besides all the loose boards and planks lying around within forty feet of the barn. Also, a watering-trough, the halters, all the harness, and bridles, curry-combs, pitchforks and shovels; besides the frame work of a hay-wagon. Also (in the dwelling-house), two feather beds and pillows, together with the bedstead.

After being valued, the five horses were led away and shot, and the stable, together with the fencing, and all of the above mentioned things, upon which a valuation was put, will be burned as soon as the wind moderates.

I also advised that all the hitching-posts and railings in the streets, and the same adjacent to the churches, and at the blacksmith shops in the village of Coleta, be removed forthwith and destroyed. On the evening of the 14th of April there was, consequently, great scarcity of places where to hitch a horse.

*Horses examined in the vicinity of Coleta, Ill., April 13th
and 14th, 1883.*

No. 1.—Black horse, owned by Martin Overholzer; manifested a slight injection of the nasal mucous membrane. History:—Had been driven to, and tied to the fence in front of, the Conaway house several times during the past two months. Was ordered to be kept under surveillance during sixty days: allowed to work on the farm, but not to be exposed in public places, nor to be sold or otherwise disposed of until further notice.

No. 2.—Black horse, owned by the Rev. Mr. Bales, of Coleta; manifested a slight gluey discharge from the right nostril and a trifling enlargement of the submaxillary lymphatics. Was ordered

not to be tied to any public hitching-post, and if led away from home, to be tied in a cow-shed.

No. 3.—Gray horse, owned by Martin V. Overholzer. Has a thickening of the nasal mucous membrane, and slight enlargement of the left submaxillary lymphatic glands. Was ordered to be kept secluded during sixty days, and not to be sold or otherwise disposed of.

No. 4.—Gray horse, owned by Martin V. Overholzer; was received from the Conaway farm six or seven weeks ago. Was ordered to be kept secluded during sixty days, and not to be sold or otherwise disposed of.

No. 5.—Old bay horse, owned by Joseph Bushman; manifested a slight enlargement of the left submaxillary lymphatics, and slight infiltration of the nasal mucous membrane. Same precautionary measures ordered as above stated.

No. 6.—Brown gelding, owned by Joseph Bushman; had several small pimples on the inferior surface of the right alæ of the nose. Same precautionary measures ordered as above stated.

No. 7.—Bay gelding, two years old, owned by Joseph Bushman; manifested a slight enlargement of the submaxillary lymphatics, and had an aqueous discharge from both nostrils. Same precautionary measures ordered as above stated.

No. 8.—Bay gelding, three years old, owned by Wm. J. Howe, kept at Joseph Bushman's farm; had slight enlargement of the right submaxillary lymphatics, slight tumefaction of the nasal membranes on both sides. Same precautionary measures ordered as above stated.

No. 9.—Gray gelding, four years old, owned by Henry S. Bushman, kept at the same above-mentioned place. Had slight thickening of the nasal mucous membranes, swelling and tenderness of tendinous bursæ of the fetlock of the left fore-leg. Same precautionary measures ordered as above stated.

No. 10.—Brown filly, one year old, owned by Joseph Dietz; manifested enlargement of the submaxillary lymphatics on the left side, somewhat adherent to the bone, and thickening of the mucous membrane of the alæ of the nose on the corresponding side. Same precautionary measures ordered as above stated.

No. 11.—Gray mare, owned by George W. Ramage, M. D., of Coleta. Manifested infiltration of the nasal mucous membrane on both sides; together with a slight puckered roughness; granular aspect of the inferior surfaces of the alæ of the nose; also, some characteristic enlargement of the lymphatic submaxillary glands on the left side. History:—Dr. Ramage bought this grey mare, at three years of age, of Wellington Conaway, in the fall of 1881. Soon afterwards there appeared an enlargement of the submaxillary lymphatic glands, with subsequent suppurating abscess. After the abscess had healed she was apparently well. Exposing her to stormy and wet weather she caught cold and discharged very profusely from both nostrils. Mr. Conaway took her back for treatment, on or about the 1st of December, 1881, allowing her to run at large among his other horses. In the spring of 1882, she was extremely poor in flesh; but she was allowed to remain on the Conaway farm until the first week in November, when the owner took her home, and found her not entirely free from a nasal discharge. At the present date, April 14th, 1883, she is in fair flesh. Ordered secluded; not to be used by the doctor for any purpose whatever during sixty days, or longer, if necessary, and not to be sold or otherwise disposed of.

12.—Sorrel stallion, aged fourteen years, owned by the late Wellington Conaway. No. 13.—Bay mare, aged fourteen; same owner. No. 14.—Bay gelding, aged five years; same owner. No. 15.—Old bay horse, broken winded; same owner. No. 16.—Sorrel gelding, aged two years; same owner. No. 17.—Sorrel gelding, aged one year; same owner.

History:—Nos. 12 to 17, inclusive, were continually exposed to the glandered and condemned horses, during the past eight months, or longer, by running at large on the owner's farm. While none of these six animals shows any decided symptoms of glanders at present, they are, however, ordered to be kept secluded, under surveillance, and the widow of the late Wellington Conaway is ordered not to sell or otherwise dispose of them during sixty days, or longer, if found necessary.

On the 14th of April, the premises of the following farmers, whose horses were supposed to have been exposed to infection,

and which are located in Genesee township, were also visited, viz :—

F. M. Smith, owner of three horses.
M. V. Crom, owner of three horses.
Chas. Olmsted, owner of five horses.
David McCombs, owner of four horses.
Chas. Shultz, owner of one horse.
Christ. Overholzer, owner of two horses.

} No suspicious symptoms found.

(*To be continued.*)

FATTY DEGENERATION OF THE HEART.

By A. A. HOLCOMBE, D.V.S.

On the 7th of June, I castrated a nine-year-old half-breed Norman stallion. He was in fine condition and had never shown any signs of disease. When the clams were applied, it was seen that both cords were very large and the blood-vessels unusually distended; so it was decided not to remove the testicle for some hours afterward. During the operation the animal struggled but little, and returned to his box apparently all right. About half an hour afterward he staggered forward and dropped suddenly to the floor, but arose again immediately. For a few minutes' time he seemed greatly excited, then became as quiet as usual. After a short time another period of excitement came on, when he was given a hypodermic injection of half a grain each of sulphate of morphia and atropia in solution. An examination of the cords from the wounds, was made, and a rectal examination of the inguinal rings, but nothing was found wrong. The respirations were somewhat accelerated and the heart-beat rapid and weak. The temperature was normal. The periods of excitement continued to recur at frequent intervals notwithstanding large doses of alcohol and morphine were given. At the expiration of five hours' time the patient had become so violent that he was cast, the testicles removed, and the hobbles left on. Another examination was made, but nothing was found to which the intense periods of excitement could be attributed. Two hours after the removal of the testicles the patient died.

A careful post mortem examination was made, revealing marked fatty degeneration of the heart. The right auricle was most affected; the right ventricle less so. The two cavities on this side had become greatly enlarged, at the expense of the walls, which were quite thin. The muscular tissues of the auricle and upper part of the ventricle were so fatty that free oil followed the knife on making an incision. All the other organs were healthy in appearance.

AN OUTBREAK OF HOG CHOLERA IN KANSAS.

By the Same.

In the early part of the winter of 1881-2, a disease appeared among the hogs on the farm of William Booth, near Winchester, Kansas. It was thought by Mr. B. and his neighbors to be measles. All the pigs and shotes, excepting one (20 in number), died. A few of the full-grown hogs had the disease and recovered. In March of this year, a sow in pig was purchased in Sedalia, Missouri, and taken to the farm. In May, a few days before pigging time, this sow died with the same symptoms shown by the pigs that had died in the winter of 1881-2. In April, another sow in pig was purchased from the same dealer, in Sedalia, and taken to the farm, where she died, in June, with the same symptoms as had affected all the others. A few days before death she had given birth to a litter of pigs, all of which soon died from the same disease. A few days afterward a full-grown boar died. These three were the only grown hogs that have died. On the 27th of June, I visited the farm and saw several sick pigs and shotes. They presented all the symptoms of hog cholera. During the day one of the pigs died and was sent to me by express in the evening. On the morning of the 28th, a post mortem examination was made. The lesions in the skin, the subcutaneous tissue, the intestines, and in the liver were all typical of hog cholera. The ulcerations of Peyer's patches were most marked; the thorax and pericardium contained considerable turbid fluid, the surface of the heart was mottled, and the pleuræ on the

left side of the chest had formed numerous adhesions. Owing to the want of an opportunity the blood was not microscopically examined. Altogether, thirty-nine animals have been lost. Fully alive to the gravity of the situation, Mr. Booth acquiesced in the adoption of stringent measures for the extermination of the disease. All the diseased animals were killed and either burned or deeply buried. The fat hogs were all butchered, and the twelve remaining pigs, apparently healthy, were turned into a field at a considerable distance from the infected yards. The old pens will be torn down and burned, and the manure, straw, etc., of the yards, will be carried to a distant field and also burned. No new pigs will be brought to the farm until next year, when a new yard and new pens will be built for their use.

COMPLICATED PUNCTURED WOUND OF THE PELVIC CAVITY.

BY WM. H. PENDRY, D.V.S.

On July 1st, I was called, near midnight, to see a small bay horse, about twelve years old, said to have had the rectum injured by backing on a shaft. When I arrived, I found the animal standing and having signs of considerable pain, but not to the extent that might be expected from a bad injury to that part. The history of the case was, that about two hours before I was called, while the driver was in the act of unharnessing, the horse was startled by some fire crackers, and plunged about, trying to get away, resulting in the shaft entering the rectum. There had been considerable hemorrhage, but of a short duration. On examination, I found there was an external wound on the right side of anus, extending from without downwards, for about an inch, and about one and a half inches in length, forming a single sac. The examination per rectum proved more interesting, from a surgical point of view, though not for the owner. I found that the shaft had entered the rectum, and apparently done no harm till it had gone about five inches, when it had caught the mucous membrane of the near lateral wall, and lacerated it for four inches, just deep enough to lay the fore finger well in. The shaft

then seemed to have left the lateral wall and caught the floor of the rectum, and at about the entrance of the pelvic cavity, making quite a small laceration. I found there was slight hemorrhage. I made the result of my examination known to the owner, stating that the case was very bad, as, no doubt, the inflammation (peritonitis) that would follow would result in death. The owner said, "*perhaps* it might not." I said, "*perhaps*," and was told to treat the horse, and do all I could for him. I cleaned the rectum well out and applied a styptic dressing, administering opium internally. The animal soon after appeared more easy, and I left him for the night.

July 2d. At times he appeared to have considerable pain, looking at his off flank, with a disposition to stand across the stall, but eating and drinking fairly. I washed the wounds with a solution of carbolic acid, and gave opium as before.

July 3d. Appeared to have less pain; still feeding somewhat; near hind leg beginning to swell from above downwards; very slight hemorrhage from wounds. Treatment as before. Pulse, 85 and weak; temperature, $102\frac{1}{2}^{\circ}$ Fah.

July 4th. Pain seemed to be more acute; very uneasy. On trying to enter rectum, found there had been hemorrhage, which was of a very dark color, with bad smell; arranged a rod with sponges, to use instead of hand; injected a solution of carbolic acid and tincture of opium, and gave pulverized opium internally as before. Soon after appeared to be more easy.

July 5th. Less pain, brighter, and inclined to eat; antiseptic dressing, with opium internally.

July 6th. Animal brighter, pain decreased, eating better, with a disposition to defecate; so inserted hand and emptied rectum, fœces being soft, but of quite a natural color, the bad smell having almost disappeared. Treatment the same; pulse about the same as on the 3d, but somewhat stronger; temperature about half a degree lower. Later during the day had natural passage with some pain.

July 7th. Everything about the same as the previous day, with passage; treatment the same; having some idea of animal weathering through, ordered alcohol in small doses, to be given with his water three or four times during the day.

July 8th. Not feeding; appeared to be very dull, hanging his head in the manger. Showed pain on pressure being applied to his abdominal walls; pulse so weak could hardly be felt; swelling of leg slightly reduced, but pitted on pressure; no disposition to move.

July 9th. Little change, except seeming to be weaker; very dull; appeared to desire to eat but the lips seemed to have no power to perform their function. Would drink well when the mouth was sunk in the water; limbs stiff, could hardly be made to move; could hardly feel pulse.

July 10th. No change from previous day, except for the first time I noticed that to micturate caused great pain, the urine passing in a very dribbling manner; sheath swollen, leg somewhat reduced in size.

July 11th. I noticed that the animal started at the slightest noise; examined for symptoms of tetanus, but got no confirmation of that idea. During the last three days had got very thin and now showed great weakness; made examination per rectum, and found it full of liquid, with particles of fœces floating about. Detected large fluctuating swelling at further end of the larger laceration, which appeared to have considerably closed up. Also several smaller ones on the floor at the entrance of the pelvic cavity; advised the owner to have animal destroyed, as he could not live much longer. As I was in the neighborhood of the stable late in the evening, I called and found that the poor brute had just dropped and was plunging about, passing, several times, a light colored liquid, mixed with blood. I at once put an end to his sufferings.

On account of the health authorities, I could not make a post mortem until the removal to the skinner's yard, which was after five o'clock the next evening, with the following result:

On the abdominal cavity being exposed, I found the peritoneum highly congested. The large colon was impacted, and was considerably congested, more particularly near the pyloric flexure. The small colon was nearly empty and but slightly congested, but of a dark yellow color. I next turned my attention to the pelvic cavity, which had been divided from the trunk by the men, and

found, on exposing the interior, it was of a deep leaden color, with an odor so strong that it was with considerable determination that I examined it. There were several abscesses formed, and the large one that I had detected in my former examination. The whole of the tissues seemed to be infiltrated with a pus-like matter. I even found this on dividing one or two of the muscles. Opening the rectum, I found it nearly as dark in color, but not infiltrated. The lacerations were just about as I had previously made out.

I now regret very much that I did not examine the whole of the organs of the abdominal, as well as of the thoracic cavity. As it was past the hour of closing down, I saw the men were anxious to get away, and this, combined with the fact that I had an appointment myself, influenced me to stop operations.

What I consider remarkable about the case is, the fact that I was never able to get a higher temperature than 103° , especially with such lesions. True, some of these might be, and were, no doubt, post mortem lesions, yet, most of them must have existed before death, as it had occurred eighteen hours previous. Then, again, the question rises in my mind, if the animal had been allowed to die, (he being destroyed) what would the death have resulted from—peritonitis, or pyæmia.

EDITORIAL.

CONTAGIOUS DISEASES IN THE UNITED STATES—THE NEED FOR BETTER LEGISLATION.

When calling the attention of our readers, in the last issue of the REVIEW, to a recent resolution of the House of Commons, in relation to animals affected with foot and mouth disease, we expressed the opinion that it was very doubtful whether this form of contagious affection could be found in the United States, and, in consequence, we could not consider this new restriction against our exportation other than an unjust and uncalled for action on the part of the English Government. The report, which we reprint to-day, of the Treasury Cattle Commission, which shows

that careful examination and researches have been made all over the continent without detecting the slightest evidence of the foot and mouth disease, will certainly do much to show the impropriety of the action of the House of Commons towards American stock. But, if we felt indignant at the injustice of this proceeding, we could not refrain from demanding evidence of the necessity of measures which would do much to relieve our people from vexatious restrictions, and would aid in getting rid of contagious diseases as rapidly and as thoroughly as possible.

We have asked for the appointment of State veterinarians and of sanitary veterinarians, connected officially with Health Boards of States and cities, and peculiar circumstances have recently occurred, which show not only the importance of such appointments, but that of severe regulations, clothing such veterinarians with power such as they may need for the official performance of their duties. These remarks are specially suggested to us by the difficulties encountered by Dr. Paaren, in Illinois, which were of such a nature that he was compelled to call upon the Attorney General of the State for his opinion as to his rights and duties. A somewhat similar case recently presented itself in New Jersey; when, notwithstanding the mortality of long standing amongst a number of horses, the similarity and the nature of the symptoms in all the animals, the undoubted evidence of contagion, the positive assertions of several agreeing veterinarians as to the diagnosis, the post mortem examination, etc., one individual resisted the official veterinarian, ignored his opinion, and, in fact, gave up his resistance only when threatened to have his business stopped by order of the principal officer of the city—the Mayor. The fact that such malignant and contagious disease existed to the extent that it did, in Illinois and in New Jersey, and that there are only imperfect laws relating to the disposition of such diseased animals, calls peremptorily for measures of reform and improvement in that direction.

Veterinary medicine has made rapid progress on this continent within the last few years, but we believe there is nothing which will better serve to elevate it in the esteem and appreciation of Americans than the services it may render in promoting the National wealth. Acting in his proper sphere and capacity,

the sanitary veterinarian, while properly armed with the authority of law, will not only look after the importation of contagious diseases from abroad, but will also be careful of the condition of the stocks at home.

NEW VETERINARY COLLEGE AND REGULATION OF THE PRACTICE OF VETERINARY MEDICINE IN CANADA.

The Deputy Minister of Manitoba has sent us the following extract of recent legislation passed in that Canadian province, authorizing the Board of Agriculture to establish a new veterinary college, and regulating the practice of veterinary medicine. The measures indicated are well calculated to check the growth of empiricism in that province.

VETERINARY SCIENCE.

The Board may establish a veterinary college for the instruction of pupils, may arrange for their examination, and grant diplomas certifying that they are competent to practice as veterinary surgeons. The Secretary-Treasurer of the Board is authorized to keep a register in which he shall record, on payment of a fee of \$10 for each registration—which fee is to be devoted to the purposes of the Board—the names of persons desiring to practice in the Province as veterinary surgeons. The only persons entitled to have their names so recorded shall be graduates of the veterinary school established by the Board, who may have received the diploma previously referred to; persons who at the time of the passing of the Act were members in good standing of the Veterinary Association of Manitoba; or persons possessing a diploma or certificate of admission to practice as veterinary surgeons in any part of the British Dominions by any body or association empowered by law to grant such diploma or certificate. Provision is made for the production to the Secretary-Treasurer, when a demand is made for registration, of the diploma or certificate upon which such demand is based and the Secretary-Treasurer, after registration, is to issue a certificate of the fact to the person whose name is so registered. Persons having registered are entitled to professional fees in attending any court as witnesses in cases relating to the veterinary profession. Any person not so registered appending to his name the term veterinary surgeon, or an abbreviation thereof, or in any way leading people to infer that he is a veterinary surgeon, or who prescribes or administers medicine to animals for pay, or in any way practices as a veterinary surgeon, is liable to a fine of not less than \$20 nor more than \$100. Clauses 14 to 20 of Chapter 18, 24 Vic., have been repealed in accordance with these provisions.

ARMY VETERINARY SURGEONS.

We publish on another page a letter from the commanding officer of the 8th Cavalry, making application for a veterinary

surgeon for his regiment. The communication speaks for itself, and is creditable to the intelligence of so distinguished an officer.

Surely the condition of the army veterinary surgeon promises speedily to undergo a change for the better, when officers of high rank and long service recognize the importance of securing for the service men who not only hold diplomas, but who have unquestioned ability. So long as present regulations exist, it cannot be expected that competent veterinary surgeons will remain in the service, for not only is the remuneration most inadequate for respectable living; under the circumstances, but worse still, there is no opportunity for promotion, pension, or retirement. Time spent in the service now, is, practically, so much time lost, for the increasing live-stock interests of the country demand more civil practitioners than all the colleges of the world have yet been able to supply, and the compensation is most liberal. If the Government would have an efficient army veterinary department, (and there can be no question as to her need) a reorganization must be effected on the principles which underlie the Medical Department. Until such changes are made the department will remain what it is now and always has been—a useless appendage.

MAJORITY OF THE UNITED STATES VETERINARY MEDICAL ASSOCIATION.

On the 18th of this month the anniversary meeting of the United States Veterinary Medical Association will be held in New York city.

For a number of years the members of this Association have assembled every six months, in New York and Boston alternately. The Association now numbers seventy-two members, from various parts of the country; most of them, however, from the eastern States, one might almost say from two States, as the largest number come from Massachusetts and New York. Still the Association is entering now upon its *twenty-first* year, in what might be called her *majority*. This we hope will mean for the society a new ambition and desire to work for the advancement and benefit

of the profession. It becomes an important duty on the part of the officers who are to be elected, as well as that of all members, to see that a new life is given to this Association to make it more worthy of its name.

Many changes ought to be made; the regular routine of her young life should be pushed aside; efforts ought to be attempted to increase the number of its members, not that we consider a large membership necessary for the quality of the work, but there is little doubt that if the number of members was larger, better and more useful results could be expected. Then again, if the membership were spread more through the States than it is, the places of meetings could be changed, and better professional intercourse realized between veterinarians throughout the land.

We hope the officers will see that the complaint which has been made at past meetings will not be heard again, viz.: the failure of committees to report upon subjects assigned them. There are many important subjects which the Association ought to take hold of, and one certainly that cannot and *must* not be ignored, is that of sanitary regulations throughout the country. The subjects of contagious diseases, as they exist amongst us; the difficulties which are raised by European Governments against our livestock trade on account of diseases, *which do not exist in our midst*; the interference that official veterinarians meet with from the public when called upon to perform duties belonging to their positions—are not all these important questions, and worthy of the careful consideration of an Association which, on account of its age, if for no other reason, ought to be considered as the representative of the veterinary profession in the United States?

We hope that when in our next issue we report the transactions of the coming meeting, it will be our pleasant duty to notice some steps in the proper direction toward securing for the *adult* life of the Association a greater renown than the one she has earned for herself during her youth, good, however, as this one has been.

PATHOLOGICAL PHYSIOLOGY.

UPON THE RESPECTIVE PART OF OXYGEN AND OF HEAT IN
THE ATTENUATION OF ANTHRAX VIRUS BY PASTEUR'S
METHOD—GENERAL THEORY OF THE ATTENUATION BY THE
APPLICATION.

BY M. A. CHAUVEAU.

The following are the conclusions of the author:—

1st. The facts already known show that heat and oxygen, sources of all vital activity, may, for ærobic infectious microbes, placed in certain conditions, change themselves into agents of attenuation, alteration and death.

2d. These conditions of attenuation belong either to the microbes exposed to them, or to the attenuating agents themselves.

3d. To determine the conditions of attenuation which are inherent to the infectious substance, it is important to use a known microbe, the *bacillus anthracis*, and to take it in the cultures of twenty hours, at a temperature $+ 42^{\circ} 43^{\circ}$, cultures where it exists in the state of threads, or virulent batonnets, having a great aptitude to undergo the various changes of qualities that one wishes to give them.

4th. It is when the protoplasm of those *bacilli* is in a state of complete inertia, to the point of view of nutrition and evolution, that it is best disposed to resent the influence of the attenuating actions. But the hereditary transmission of the attenuation then takes place imperfectly.

5th. If, during the effects of the attenuating actions, the protoplasm has retained a certain prolific activity, the attenuation takes place with more difficulty, but is more completely transmitted to the future generations.

6th. No serious attenuation can manifest itself during the integral action of the developing faculty.

7th. This faculty being closely connected with the influence of heat and of oxygen, the attenuation in its various degrees depends then on the conditions which render these agents agenesical, dyogenesical, or engenesical.

8th. The absence of oxygen is an essentially agenesical con-

dition. Then, in the vacuum, the cultures prepared for attenuation modify themselves in a remarkable, regulated manner, under the influence of heat. From zero to $+ 50^{\circ}$, this influence reaches its extreme result, that is, the death of the microbes, in a length of time varying from 15 to 20 days down to a few hours. From the experiments of M. Bert, the increase of pressure of oxygen must also be placed amongst the agenesical conditions.

9th. If the temperature goes beyond the well known limits of the engenesy, it becomes first dysgenesical, then agenesical, and then has a powerful attenuating influence upon the cultures, either exclusively by itself, or with the assistance of the oxygen. The influence of this last is not very great, so far as attenuating force, only in the cases where the agenesy is due to the lowering of the temperature; and again this influence is of little activity. When the agenesy depends upon the elevation of the temperature, the pressure of oxygen, instead of assisting, diminishes attenuation very sensibly.

10th. It is, then, especially by excess of heat, in the absence of oxygen, that cultures become attenuated, altered or die; on the other hand, if the oxygen acts but little, by its pressure, as debilitating, it is when heat is missing. Thence it is seen that to produce their maximum of action, in adding their effects together, the two attenuating agents, heat and oxygen, must be placed in respectively inverse conditions.

11th. Material alterations always take place in the substance of the *bacilli*, whose activity is destroyed or only diminished by the fact of an attenuating cause—segmentation and partial disparition of the protoplasm, or its transformation in pseudo spores. At times these alterations are light and cannot give an idea of the serious effect produced on the physiological properties.

12th. Any culture prepared in typical conditions, that is to say, arrested in its development, after twenty hours of exposure to heat, $+ 42^{\circ}$ 43° , and which has gone through an agenesical period, during which a certain attenuation has taken place, revives and completes its growth when it is placed again in engenesical conditions. In the same way a second culture, containing the attenuated *bacilli* of the first culture, develops itself perfectly

well in the thermostat at $+ 35^{\circ}$ about. The very vigorous spores which result from those cultures do not possess all the virulency of those of normal cultures and are distinguished by a great aptitude to become still less active under the influence of heat at $+ 80^{\circ}$ 85° .

13th. Under this last condition, these spores constitute, for sheep, a virus of preventive inoculation which, by the facility of its preparation, the certainty of its preservation, its innocuity, and solidity of the immunity it gives, seems to be not inferior to any other protective agent.

14th. When the attenuation of the *bacilli* of the culture, prepared *ad hoc*, has taken place at a temperature only digenesical, that is to say, compatible with a slow combination of a certain growing movement (method of M. Pasteur), the spores of engenesical cultures following this first culture do not need a special heating process to complete their attenuation. They are directly in possession of the maximum of benignity that attenuation has given to the elements of the first culture.—*Gazette Medicale*.

EXTRACTS FROM FOREIGN JOURNALS.

FURIOUS RABIES IN A DONKEY.

BY PROF. BRUSASCO.

In October, 1882, an entire donkey was brought to the veterinary school of Turin, which presented peculiar symptoms, and seemed to suffer with a disease of the genito-urinary apparatus. His appetite was capricious, he was dull, balancing his head frequently, had an extraordinary venereal excitation, showed some tendency to bite, and had frequent painful passages of dark urine. The whole was accompanied with a certain weakness of the hind legs. When admitted to the school, he had refused all kinds of food, solid and liquid, for 15 hours. He was firmly secured, and placed under observation. He soon began to rear, throw himself down, to get up again, and constantly opened his mouth, as if ready to bite, chew the rope that tied him, or bite at the wall. His lips

and mouth were bloody; he tried to gnaw all surrounding objects, passed very often a few drops of cloudy urine.

The diagnosis of rabies was made, and he was destroyed. The history was, that some time previous, numerous cases of rabies had existed in the neighbourhood, and the probabilities were that he had been bitten.—*Il Medico Veterinario*.

A FAST OF FOURTEEN DAYS BY TWO CATS.

By M. CARALLAZZI.

Towards the end of 1880, a gentleman from Latisana had some repairs done to the stone floor of the piazza of his house. During that time, the workmen raised a stone, which left open, while they went to their meal, a hole communicating with a cavity beneath. A cat and her kitten entered that cavity, which was closed up by the workmen afterwards, thus burying alive the two animals, to which the owner was much attached. Later in the day, search was made for them, but in vain. It was thought that they were lost, when, in the evening of the fourteenth day, the gentleman, in walking on the piazza, thought he heard their voice. The stone was raised, and the two animals, very weak and emaciated, came out of their prison, much the worse for their confinement. Both recovered quickly, by good feeding.—*Ibid*.

DYSTOCHIA IN A EWE BY ADHESION OF THE UTERUS TO THE ABDOMINAL WALLS—CÆSARIAN OPERATION—RECOVERY.

By N. GUALTIERO.

In March, the author was called to visit a ewe at term, for forty hours, but which, however, showed no signs of labor. The abdomen was voluminous, the feeling gave the sensation of a fœtus, which was thought dead, on account of the absence of all movement. The general condition was bad, the animal was thin and without appetite. She had already had two normal deliveries.

The Cæsarian operation is decided upon. An incision of 18 centimeters is made on the linea alba, down to the peritoneum. An adhesion is then observed between the external walls of the

uterus and that membrane. The incision is enlarged, the uterus opened, the foetus and its envelopes are removed. The little cadaver is free from putrefaction. The incision is closed by sutures, and compresses of cold water put on, and kept in place with a wide bandage. A high fever followed, but soon the cicatricial parts progressed favorably. Towards the twelfth day, a portion of the uterus seems gangrenous; it is carefully brought outwards, and amputated. Two days later, the balance of the organ has to be removed. The cicatrization went on well, and the ewe was fattened, and sold afterwards for the butcher.—*Ibid.*

A CASE OF TORSION OF THE UTERUS IN A BITCH.

BY M. GUILLEREAU.

At the post mortem of a bitch that died from difficult labor, the author found the left horn of the uterus empty. The right, very large, was resting in the right side of the abdomen. It formed a deeply incurved arch, beginning forward, by the left ovary, stretched towards the right side of the vertebral column by its ligament, rolled upon itself, and ending behind at the junction of the two horns. At that point there was a contraction of the organ so great that the horn was reduced, upon a length of three centimeters, to the size of a lead pencil. This part having rotated round the principal arch, was twisted in a spiral manner. The round ligament was involved in this anomaly, in forming a wide twist, which entirely covered the contracted part of the uterine horn. In the walls of the left horn were several lacerations, through which the liquid of the amnios had escaped into the abdomen. The tissue of the wall was of a dark purple color. The horn contained two little puppies, perfectly formed, dead and swollen. After opening and emptying the horn, it was found that its cavity was entirely obliterated behind, in such a way that the horn as well as the uterine neck formed a funnel, ending at the twisted portion. It was evident that the left horn had not only twisted upon its axis, but also had undergone, in its posterior part, considerable atrophy with obliteration of the canal. Hence the complete impossibility of removing the foetus, except by gastro-hysterotomy. The author concludes in discussing the

question of priority of this alteration, and ends his paper by saying: The twisting of the uterus "*is possible every time that the length of the organ, when full, is sensibly greater in extent than the transversal diameter.*"—*Archives Veterinaire.*

CANCER OF THE TESTICLE IN A CRYPTORCHID HORSE.

By M. MAURI.

The subject had for six months, in the left groin, a tumor, at first of small size, but which gradually increased to that of a man's head; at the same time he was losing flesh, and becoming less ambitious to do his work. This tumor, which had become enormous, and whose base was formed by the testicle, extended to the anterior extremity of the sheath and towards the stifle. It had a globular form, and could not be defined at its base. It was hard, resisting, covered with a few hairs, and traversed by quite large blood-vessels running on its surface. Its temperature was not higher than that of the surrounding tissues. At the exploration by rectum, it was observed that the superior left inguinal ring was largely dilated, and that a bosselated, hard, somewhat movable tumor, of the size of the two fists, was hanging over it by the mesentery.

The horse was operated upon, but died a short time after. Separated from the surrounding tissues, the tumor had the general appearance of a testicle of enormous dimensions. It weighed 4 kilogrammes 500 grammes, (about nine pounds). The microscopic examination left no doubt as to the nature of its structure. It constituted an encephaloid sarcoma, which had devoloped under the tunica albuginea of the testicle, whose resistance had allowed the organ to preserve its form while attaining its enormous proportions.—*Annales de Belgique.*

EPILEPTIFORM AFFECTION IN HOUNDS. (AURICULAR ACARIASIS.)

By M. NOCARD.

Under this title is related an affection which particularly attacks hounds, and is characterized by epileptiform fits. "In

the kennel, at rest, nothing indicates the existence of the disease; the affected animals are as gay, lively, and in as good condition as the others." It is while *hunting* that the access manifests itself; loud hollowing, an anxious look, foaming at the mouth, uncertain movements, and then falling down in a fit of an epileptic nature. After a quarter or half an hour of rest, the animal seems to get over his trouble, and resumes his work as if nothing had happened. From information obtained, it seems that no other work or exercise but that of hunting will give rise to the access.

At the post mortem of dogs destroyed on account of this disease, the author found the external auditory canal containing a large quantity of cerumen, packed toward the membrana tympani. Under the microscope, a portion of this waxy secretion showed a great quantity of acarus in all shape of growth, belonging to the gender *choriopes* (*Lymbiotes* of Delafond) and to the species described by Magnin, as the *choriopes ecaudatus*. The treatment consists in washing the canal with a liniment made of sweet oil 100 parts, naphtol 10 parts, sulphuric ether 30 parts. The liniment is injected into the external auditory canal, and this is closed for ten or fifteen minutes so as to prevent the evaporation of the ether.—*Annales de Belgique*.

FOOT AND MOUTH DISEASE.

REPORT OF THE TREASURY CATTLE COMMISSION AS TO ITS PRESENCE IN THE UNITED STATES.

WASHINGTON, August 2, 1883.

The Treasury Cattle Commission has made the following report to the Treasury Department in regard to the alleged existence of the foot and mouth disease among the cattle in this country:

Charges having been recently made in the British Parliament that cattle were being shipped from our ports infected with foot and mouth disease, and a majority of the House of Commons having voted for a resolution opposing the importation into Great

Britain of cattle from any country in which said disease exists, we feel it our duty to state the facts of the case so far as this country is concerned. After a most extended and almost exhaustive inquiry, your commission have been able to find no trace of foot and mouth disease, apart from herds just landed from Great Britain, and those herds have been in every case segregated until the infection has entirely disappeared. The nature and scope of our inquiry may be deduced from our report for 1881. Beginning with the great rendezvous of cattle at Kansas City, Council Bluffs and Omaha, we have made careful investigations along all the lines of cattle traffic as far as the eastern seaboard. In this investigation we have included all the great stock yards where cattle are detained for feeding, watering, sale, &c.; all the great feeding stables connected with distilleries and starch, glucose and other factories; all the city dairies where stockyards exist and where the herds are replenished from such stockyards, and to a large extent the great dairying districts into which cows are drawn from the above-named stock yards and lines of travel. Up to the present date we have made observations in the stock yards at the seaboard, the terminal end of our cattle traffic, and that to which all infection must gravitate, but apart from the imported cases above referred to, we have been unable to find a single case of the foot and mouth disease complained of.

CHARACTERISTICS OF THE MALADY.

The significance of the entire absence of this disease along the whole line of our cattle traffic and in the herds into which this traffic leads, can only be appreciated when considered in its relation to the nature of the disease and the unmistakable symptoms by which it is manifested. The following points are specially to be noted:

First—The foot and mouth disease is, perhaps, the most contagious malady known. It rarely enters a herd without striking down all the members of that herd simultaneously or nearly so.

Second—The susceptibility to the disease is all but universal on the part of warm blooded animals, but all cloven footed

animals are especially and about equally predisposed to it. It cannot be overlooked nor covered up, therefore, as can a disease which confines its ravages to a single genus; but sheep, goats and swine coming within the range of the infection contract and manifest the disease as readily and in as marked a way as do cattle.

Third—The period of latency or incubation is remarkably short, the eruptions of the malady often taking place in thirty-six hours and rarely being delayed, even in cold weather, beyond six days after exposure to infection. There is, therefore, no opportunity for concealment nor for the disposal of infected but still apparently sound animals, while a journey of four or six days from the west, with the attendant privations and febrile excitement, would infallibly determine the full eruption of the disease before the stock arrived at the eastern seaboard, and this although the infection had only been received after shipment on the cars.

NOT TO BE HIDDEN.

Fourth—The manifestation of the disease is not only so universal in the herd affected, but so prominent and unmistakable that it could not possibly be overlooked. No one could ignore for a moment the swollen digits, the lameness and the blisters or ulcers between the hoofs; the heat, tenderness, swelling and blisters or raw sores on the udder and teats and the abundant frothing and slobbering at the mouth; the frequent loud smacking noise made with the tongue and palate and the large rounded blisters or red angry sores on the mucous membrane of the mouth. These cannot escape the attention of the owners and attendants, and especially when a whole herd of ten, fifty or one hundred are suffering simultaneously. Much less can they escape the instructed eye of the professional veterinarian.

HISTORY OF THE DISEASE IN THIS COUNTRY.

In this connection it may be well to state that the invasion of the foot and mouth disease that swept from Canada over Northern New York and New England in 1871 created something

closely approaching a panic. The agricultural papers were full of the subject. State boards of agriculture convened and discussed the subject. A convention of delegates from different States met at Albany, N. Y., and it was the engrossing theme for every local farmers' club along the lines of infection. This invasion, imported into Montreal with two English cows, fortunately occurred in autumn, and the long seclusion of the herds during the ensuing winter virtually stamped it out, the infection not having extended beyond herds in enclosed pasturages or buildings. Most of our farmers are as ignorant of the disease to-day as they were in 1871, and any new invasion could not fail to produce a similar excitement and consternation. It should be added that our connection with the States as well as the United States brings us constant complaints of diseases supposed to be contagious, and we have not found any evidence of the actual existence of the foot and mouth disease at any point among our home herds. We cannot pass unnoticed the two latest importations of the disease from England. Two years ago the steamship *France*, of the National line, landed in New York a herd of Channel Island cattle suffering from foot and mouth disease. These were quarantined by the State authorities and the infection stamped out. The *France*, however, after an attempted disinfection, shipped a cargo of American beeves for the return voyage, and these, on arrival in England, were condemned as being infected with foot and mouth disease. This was undoubtedly contracted on board ship. The second case is that of the steamship *Nessmore*, which in March, 1883, landed in Baltimore a herd of Channel Island cattle suffering from foot and mouth disease. These again were secluded as soon as detected by the Pennsylvania authorities, and no evil consequences to our home herds can be traced. But the steamship *Nessmore*, after an attempted disinfection by the agents, shipped a cargo of American fat cattle, and these on arrival in England were found to be suffering from foot and mouth disease. This infection, unquestionably contracted on board ship, appears to have been the main, if not the sole, occasion of the recent questions and resolution in the British Parliament.

BROUGHT IN EACH CASE FROM ENGLAND.

That the infection was not derived from American herds, but from English, is beyond all dispute, alike in this case and in that of the France, two years ago. The same is true of our extensive invasion in 1871, which was derived from two imported shorthorn cows, and which was thoroughly extinguished without having gained any permanent foothold. We do not deny that other cargoes of American cattle may have been found suffering from the disease in question on arrival in England, but this is amply accounted for by the occasional use for these cattle of head ropes and other appliances that have been previously used for European cattle. But on this point we insist with the greatest confidence that there is no evidence whatever that our American herds are now suffering from foot and mouth disease, and that there is as strong evidence of its non-existence as can well be produced on the negative side of the question.

JAMES LAW,
E. F. THAYER,

United States Treasury Cattle Commissioners.

SOCIETY MEETINGS.

MICHIGAN STATE VETERINARY MEDICAL ASSOCIATION.

A meeting of veterinary surgeons was held in Detroit, in the parlors of the Michigan Exchange, on Tuesday, July 31st, for the purpose of organizing a State Veterinary Medical Association.—Present, E. A. A. Granger, Lansing; D. G. Sutherland, East Saginaw; R. Jennings, Detroit; B. C. McBeth, Battle Creek; J. Hawkins, Detroit; W. J. Byers, Charlotte; C. W. Stowe, Detroit; A. M. Abbott, New Boston; J. A. Dell, Ann Arbor; A. J. Chandler, Detroit; S. Brenton, Jackson; A. J. Murry, Detroit; H. Audrain, Hamtraunck; C. A. Waldron, Tecumseh; R. Watkins, Grand Rapids; J. H. Ferguson, Bay City; D. Cummings, Port Huron. Upon motion of Dr. Murray, Prof. E. A. A. Grange, of Lansing, took the chair, Dr. Chandler, of Detroit, acting as Secretary. Dr. Chandler was

then called upon to state the object of the meeting, and in so doing, referred to the call that had been issued in the United States *Veterinary Journal* and *Michigan Farmer*, saying that its chief object had there been set forth, namely, the formation of a State Veterinary Association.

A committee was then appointed to draft the Constitution; also, a committee on credentials. After their several reports were adopted, The Michigan State Veterinary Medical Association was duly organized by the election of the following officers: President, J. Hawkins, Detroit; 1st Vice-President, D. G. Sutherland, East Saginaw; 2d Vice-President, A. J. Murry, Detroit; 3d Vice-President, D. Cummings, Port Huron; Recording Secretary, A. J. Chandler, Detroit; Corresponding Secretary, J. A. Dell, Ann Arbor; Treasurer, S. Brenton, Jackson. Board of Censors, A. J. Murry, D. G. Sutherland, J. Hawkins. The United States *Veterinary Journal* was adopted as the organ of the Association.

Mr. J. E. Daniels, Secretary and manager of the *Journal*, returned his thanks to the Association for the compliment, and in a somewhat lengthy address, spoke of the benefits to be derived from such organizations.

After appointing Dr. Chandler, of Detroit, to prepare a paper on Glanders, and Dr. Dell, of Ann Arbor, on Tuberculosis, to be read at the next meeting, the Association adjourned to meet at Detroit, on Wednesday, September 19th, 1883.

UNITED STATES VETERINARY MEDICAL ASSOCIATION.

The twenty-first annual meeting of the United States Veterinary Medical Association will be held in the lecture room of the American Veterinary College, 141 West 54th street, New York city, on Tuesday, September 18, 1883, at 10 o'clock, A.M.

Election of officers, papers and discussion, and other business will come before the meeting.

CH. B. MICHENER, Secy.

CORRESPONDENCE.

UPON THE MICHIGAN VETERINARY CONVENTION.

89 CONGRESS STREET, DETROIT, August 14, 1883.

Editor Veterinary Review:

SIR.—A convention of Michigan veterinary surgeons was held in Detroit, on the 31st of July, and after considerable discussion, a State Association of veterinarians was formed. It is not my intention to give any detailed account of the proceedings of the convention, but rather to give my views in regard to some of the subjects which were discussed. I may mention that the constitution and by-laws of the Illinois State Veterinary Society were, in the main, adopted.

According to the constitution of the Illinois Society, those persons who have attended a veterinary college recognized by the State Board of Health, are eligible to become members of the Society. This, however, was objected to at our meeting, on the ground that the State Board of Health has no special knowledge of the status of veterinary colleges, and the convention, in framing the constitution of the Michigan society, transferred this power to the State Veterinary Association itself.

There was a good deal of discussion in regard to the terms on which veterinarians, who have not graduated from a recognized college, should be admitted to the State society. The Illinois Society lays it down, that the certificate of two physicians, as to the standing of a veterinary practitioner, who has been in practice for ten years, shall render him eligible for examination by the Board of Censors of the Society. The Michigan convention held that the certificates of two physicians would not prove the ability or standing of a veterinarian, as the training and experience of the physicians have not qualified them to judge of his qualifications. The Michigan convention accordingly dispensed with the physician's certificate, but they required that any non-graduate, coming before the Board of Censors for examination, must pay a fee of \$5. The examination is to consist of written answers in veterinary medicine and surgery, and a general oral examination.

There was considerable discussion as to the policy of requiring a fee from non-graduates who desired to be examined, and Mr. Daniels, of the United States *Veterinary Journal*, who was present at the convention, urged strongly that if the lines of the society were drawn too tight, so as to exclude existing non-graduate practitioners, no bill would be obtained from the Legislature to protect the veterinary profession, owing to the small number of members forming the State Veterinary Association.

I may say, in reference to the above argument, that at present there are few, if any, of the State Legislatures which will, at present, pass a law giving qualified veterinarians the exclusive right to practice their profession, as they are not numerous enough to make such a request with any show of justice; but to overcome this obstacle by adopting into the profession a large number of non-graduate practitioners, would be a most ruinous policy. It will be necessary for the veterinarians of each State to wait until they are in a position to ask for a protective law, and it would be a very injudicious policy to ask for such a law too soon, as it would be courting certain defeat. The status of the veterinary profession is at present low enough, and to those who have even a short experience as veterinary practitioners, it will be plain that it would become very much lower, by adopting into the profession a large number of veterinary practitioners who have received no professional education, and would also place the State veterinary societies in the position of competitors of the veterinary schools. I may state that there does not appear to be any objection to the admission of non-graduate veterinarians to the State societies, provided they are men of good education, general and professional, but I think that veterinarians of such a stamp are by no means numerous, and they would not swell to a great extent the ranks of the profession.

Some misconception exists in this country in reference to recent legislation by the British Parliament, tending to protect qualified or educated veterinarians in the practice of their profession. According to the recent Act of Parliament, a number of existing practitioners who have been in practice for at least

five years previous to the passing of the Act, will be entitled to continue in practice as veterinarianians, but this recognition merely applies to their legal rights, and they have not been adopted as members of the profession, or as members of any of the veterinary societies which exist in Great Britain. I make this explanation to show that no parallel can be drawn between the action of the British Parliament, recognizing the right of a body of men to continue to follow the vocation by which they have made their living for a number of years, and the proposal to adopt into the profession non-graduate veterinarianians, in sufficient numbers that the Legislatures of States might be requested to prevent any one from practicing except members of the State veterinary societies. It is obvious enough that the State veterinary societies may accomplish a great deal of good to the veterinary profession and to the people in general, by using their influence to improve the laws relating to the diseases of animals, but it is well that they should not be too active, and that they should not attempt to accomplish that for which neither the profession nor the people are prepared.

Yours respectfully,

A. J. MURRAY.

VETERINARY SURGEON WANTED.

HEADQUARTERS EIGHTH CAVALRY,)
 POST OF SAN ANTONIO, TEXAS. }
 JULY 26th, 1883.

To the President of the American Veterinary College, New York City :

SIR,—I have the honor to inform you that there exists at the present time in this regiment a vacancy in the office of Junior Veterinary Surgeon. Can you recommend to me a graduate of your college? The pay amounts to \$75 per month, and the enclosed selections from the paragraphs of the Regulations of the Army, will give a general idea of the duties required. I should feel more confident in getting a good and reliable man through your selection than in any other way. Of one thing I would be

very particular, and that is in regard to the sobriety of the applicant. I should be pleased to hear from you at your earliest convenience.

Very respectfully, your obedient servant,

ERNEST OTIS,

Colonel 8th Cavalry, Commanding the Regiment.

ARTICLE XXIX.

VETERINARY SURGEONS OF CAVALRY REGIMENTS.

287.—Appointments as veterinary surgeons will be confined to the graduates of established and reputable veterinary schools or colleges. They will be appointed by the Secretary of War, in numbers not to exceed the legal establishment, and only on recommendation from the commanding officer of the regiment, supported by the requisite proofs of learning and skill, and by approval of intermediate commanders. (G. O. 36, 1879.)

289.—A veterinary surgeon is, from time to time, to visit all the companies of the regiment to which he belongs; to instruct the farriers and enlisted men in the proper and humane care of the horse, in order to the prevention and treatment of diseases; especially to teach the anatomy and pathology of the foot. He should illustrate his instructions by dissections and specimens, to show the nature and uses of all parts of the horse's foot, and he should also teach the principles and practice of horseshoeing. (G. O. 36, 1879.)

290.—Veterinary surgeons are to have free access to the stables, and their suggestions for the care and treatment of horses must be enforced by the authority of the commanding officer. (G. O. 104, 1868.)

291.—Veterinary surgeons and farriers should be encouraged to make and preserve collections of specimens obtained from post mortem examinations, illustrating the anatomy and pathology of the horse, in order to popularize and disseminate a knowledge of those important subjects in the army. (G. O. 36, 1879.)

292.—In order to encourage thoroughness and system in the study and treatment of the diseases of the horse, as well as to furnish information regarding the management of the Veterinary Department of the Army, a monthly report of sick and wounded for each company and battery, similar to that adopted by the Medical Department, should be forwarded by veterinary surgeons and company farriers, through the company and post commanders, to the Quartermaster General. (G. O. 36, 1879.)

True extracts from "Regulations of the Army of the United States," edition 1881.

J. D. HICKEY,

1st Lieutenant and Adjutant 8th Cavalry.

PERSONAL.

Professor James Law, of the Treasury Cattle Commission, sailed for Europe on the Pavonia, August 15th. Professors A. Liautard and J. L. Robertson, of the American Veterinary College, sailed on the steamer France, August 22d. The three gentlemen are delegates to the Fifth International Veterinary Congress.

By an order in Council, dated August 8th, D. W. McEachran, of Winnipeg, has been appointed Provincial Veterinarian, acting under the Department of Agriculture.

VETERINARY JURISPRUDENCE.**AN EXPERT IN A CASE OF ROARING.**

Q. What is your business ?

A. Veterinary surgeon.

Q. How long have you been engaged in that business ?

A. I have been practising some over twenty years ; for eight years I haven't done anything else.

Q. State what the defect in horses called "whistling," is, what it arises from and where is the seat of the difficulty ?

A. I have found it in my practice caused from ulceration of the throat—horse disease ; I have never seen a horse in my practice that whistled unless he had that disease ; it is located in the throat—right in the swallow.

Q. Can it, in your judgment, be produced suddenly—by a tight collar ?

A. I shouldn't think it could ; it might be for a few minutes, but as soon as the horse got his breath he would get over it.

Q. How have you discovered it was in the throat ?

A. By examining the throats of horses, and driving horses and getting out and examining them, and I find the trouble in the windpipe close to the jaw ; I have noticed in wind-broken horses the glands were ulcerated more or less.

Q. As a permanent trouble can it be produced suddenly, or is it the result of disease, continued disease?

A. I think it is the result of disease, the cause is the disease; I never knew a horse to be a whistler unless he had some disease.

Q. How would a collar, if it was too tight, affect the horse?

A. It would choke the horse for that time, but if you gave him a larger collar, probably it wouldn't affect him any; by choking a horse, at the time, it would cause him to whistle.

Cross-examination:

Q. How long have you resided in Cape Elizabeth? You reside there, don't you?

A. I do; I have resided there 47 years.

Q. Where did you first reside?

A. My folks lived in the center of the town, near Captain Scott Dyer; I lived a number of years at the Ocean House.

Q. Were you the plaintiff in the case of Maxwell against Gerry?

A. I was.

Q. Have you had a farm any of the time?

A. Yes.

Q. What part of the time have you or your wife had a farm?

A. I haven't had any for the last eight years; we had a farm, but Mr. Gerry managed to get it; I haven't lived on any farm for eight years.

Q. Where did you study to be a doctor?

A. I got it from practice and studying books.

Q. How many horses' throats have you ever dissected that were whistlers?

A. I have had a number myself, and I bought a horse myself and dissected him.

Q. Was he a whistler?

A. Yes, that is what I bought him for.

Q. When was that?

A. Somewhere about five years ago.

Q. What did you pay for him?

A. Five or ten dollars.

Q. Who did you buy him off?

A. Lombard, I think his name was.

Q. Where did he live?

A. I think in Westbrook.

Q. Any other disease about the horse excepting that?

A. There might have been.

Q. You say whistling takes place only when there is some disease of the upper part of the throat?

A. I say it is in the windpipe.

Q. How far down does the windpipe extend in a horse's neck?

A. It extends, if I understand it, to the lungs.

Q. Then it may be a difficulty existing anywhere from the glottis down to where the air passages separate?

A. I think it is a trouble in the upper part of the throat.

Q. Might there not be inflammation of the air passages to the lungs, so as to cause whistling?

A. If the trouble was in the air passages, he would breathe unnatural at all times.

Q. If his throat was ulcerated, why wouldn't he breathe unnatural at all times?

A. He wouldn't be likely to whistle all the time. In a bad whistling horse the throat is separated—the windpipe is separated—and one part of the windpipe shuts above the other. I mean there is a separation. As I have seen it one, part slips by the other. I can't express my opinion exactly here.

Q. What do you mean by the windpipe separating?

A. The windpipe is all in joints, and they will expand and shrink together. There is a membrane between each one that holds the bones together. Then there is a bunch in the throat where the bones aint formed like the rest. There is a joint in the windpipe. I consider it the same as the joint in a man's elbow.

Q. Do you say there is a joint in a horse's windpipe like the joint of your elbow?

A. Yes; it is right in the centre of the windpipe, and there is a ligature that holds it together, and there is where it separates, and causes him to whistle.

Q. Have you ever read "Yonatt on the Horse?"

A. I have seen it.

Q. Give us the names of any works on the horse you have read?

A. I have read a number of different works. I have got Dr. Dadd's and Brown's works.

Q. Isn't it laid down by the best writers that this roaring or whistling is frequently caused by paralysis of the nerves or muscles of the throat?

A. It might be caused by a difficulty with the muscles of the throat—that is just what I said. It is caused in the first place by inflammation in the throat.

Q. What is the difference between inflammation and paralysis?

A. There isn't much difference?

Q. You swear that a person that has an inflammatory disease is in the same condition as a person suffering from paralysis?

A. If he has got the paralysis long enough to have a fever, it would be the same.

Q. You say if he has *got* paralysis—what do you mean by that?

A. If a horse had paralysis in the legs, it wouldn't affect his throat. I hardly ever saw a horse have paralysis.

Q. Is paralysis an affection of the nerves or muscles?

A. I should think of the nerves.

Q. Is it a disease, or the result of disease?

A. Sometimes it is the result of disease. When it gets along far enough to cause a fever, it is disease.

VETERINARY LEGISLATION.

CONCERNING GLANDERS IN HORSES, MULES AND ASSES.

An Act to amend the title of an Act entitled "An Act to suppress and prevent the spread of pleuro-pneumonia among cattle," approved May 31, 1881, and to add to said Act three additional sections.

Section 1. *Be it enacted by the People of the State of Illinois, represented in the General Assembly, That the title of an act*

entitled "An act to suppress and prevent the spread of pleuro-pneumonia among cattle," approved May 31, 1881, be, and the same is hereby amended, so as to read as follows: "An act to suppress and prevent the spread of contagious pleuro-pneumonia among cattle, and contagious and infectious glanders among horses, mules and asses."

Sec. 2. *And be it further enacted*, That there is hereby added to said act three additional sections, to be known as sections 10, 11 and 12, which shall read as follows:

"Sec. 10. *And be it further enacted*, That all rules, regulations, requirements, fees, salaries and penalties that attach to, or are embraced in the act aforesaid, shall apply and be enforced in like manner in the suppression of and prevention of the spread of the disease known as contagious or infectious glanders among horses, mules and asses; and that all officers, agents or employees named in said act, shall have all the authority to, and shall be required to enforce all laws laid down in said act for the suppression and prevention of pleuro-pneumonia among cattle, for the suppression of and the prevention of the spread of contagious and infectious glanders among horses, mules and asses, and for said purpose may use and exercise all the powers mentioned in said act.

"Sec. 11. *And be it further enacted*, That the sum of ten thousand dollars (\$10,000) is hereby appropriated for said purposes, or so much as is necessary, \$3,000 of which shall be used as a contingent fund, for which said veterinary surgeon shall give bond, with approved security, and a sworn statement to the Governor of the manner and necessity for such expenditure, out of any moneys in the State treasury not otherwise appropriated.

"Sec. 12. Whereas, the disease known as contagious and infectious glanders is now prevailing in many parts of the State, entailing great loss in property of the State, and endangering human life, therefore an emergency exists, and this act shall be in force from and after its passage."

(Approved June 13, 1882.)

OFFICIAL OPINION OF THE ATTORNEY-GENERAL.

STATE OF ILLINOIS. }
ATTORNEY GENERAL'S OFFICE. }
SPRINGFIELD, July 16, 1883.

N. H. Paaren, M. D., State Veterinarian,

SIR:—Your communication of the 13th inst. received, in which you ask my official opinion as follows: "The horse of George Grove, of Sterling, Illinois, has been exposed to glanders, and upon examination shows evidences of the disease to such an extent that I have deemed it my duty to order the horse appraised and killed to prevent the disease from spreading in the vicinity. Whiteside County has had many cases of this disease, and two men have died from glanders, having taken it from communication with horses thus diseased. It is claimed that I cannot order killed or quarantined any horses until the disease has become epidemic, and the Governor has issued his proclamation under Sec. 2 of the Act of 1881."

Under this state of facts, you ask me if you are required to wait until the disease has become epidemic and the Governor has issued his proclamation of the fact, before you can take any measures to restrain or stop the disease, or can you, when you find a horse with the glanders, have it appraised and killed, or order a quarantine, without waiting until the disease has spread over the country to such an extent that it may be called epidemic?

I may say, in the beginning, that your duties and powers are confined and circumscribed by the terms of the statute authorizing your appointment. The act was passed May 31, 1881, and was amended June 13, 1883.

You have no power or authority, as State Veterinarian, except that expressly given by these acts, and such as may be necessary to carry out the powers therein expressly given. The act of 1881 applies only to pleuro-pneumonia among cattle. The act of 1883 extends the authority of the State Veterinarian to cases of glanders among horses, and declares, that all officers named in the act concerning pleuro-pneumonia among cattle, "shall have all the authority to, and shall be required to enforce all laws laid

down in said act for the suppression and prevention of pleuropneumonia among cattle, for the suppression and prevention of the spread of contagious and infectious glanders among horses, mules and asses, and for said purpose may use and exercise all the powers mentioned in said act."

Under this law we must go back to the act concerning pleuropneumonia to learn what are the powers and authority given concerning glanders. In the law of 1881, therefore, we find it is made the duty of the Governor to appoint a competent veterinarian, whose duty it shall be to investigate all cases of contagious or infectious disease, and to make visits of inspection to any locality where he may have reason to suspect that contagious or infectious disease may exist.

In Sec. 2 it is made the State Veterinarian's duty to order a quarantine of any infected premises, in all cases of pleuropneumonia among cattle, and if the disease becomes epidemic, the State Veterinarian shall notify the Governor, who shall then issue a proclamation forbidding all animals from being removed, &c.

This section then provides as follows: "In case of epidemic, as aforesaid, the State Veterinarian shall order the quarantine of infected premises, and shall order the slaughter of diseased animals thereon, and in cases of pleuro-pneumonia among cattle, he shall, as hereinafter provided, order the slaughter of all cattle upon the premises which may have been exposed to contagion, but before doing so, he shall call in consultation with him two reputable veterinarians or practicing physicians, residing within ten miles of the infected premises, and shall not order the slaughter of any animals, not actually diseased, without a written order signed by one or both of said veterinarians or practicing physicians."

It is upon the construction of this section that all your questions hinge. To be directly applicable, we should read, under the law of 1883, horses for cattle, and glanders for pleuropneumonia. We thus read the first clause of Sec. 2, of this act:

"In all cases of glanders among horses in this State, the State Veterinarian SHALL HAVE AUTHORITY to order the quarantine of infected premises."

The power here given is a discretionary one, which the State

Veterinarian may exercise, or not, as he may deem proper. It is further provided, in the same section that, in case the disease shall become epidemic, the State Veterinarian shall notify the Governor of the fact, who shall thereupon issue his proclamation, etc. It then provides, "In case of epidemic, as aforesaid, the State Veterinarian SHALL order the quarantine of infected premises," etc. In this case there is no discretion left with the State Veterinarian, but he MUST quarantine the infected premises.

Therefore, in answer to your question concerning your power and duty to order quarantine of any premises, I will say that, if the Governor has proclaimed any district or locality infected with the disease of glanders, you MUST quarantine all premises where the disease has been, within the infected district. But if no proclamation has been issued and you have discovered the disease in any animal mentioned in the law, you may, if you deem proper, order the premises where the animal was kept to be properly quarantined.

Concerning your power to order the slaughter of glandered animals, I find that the law provides that, "In case of epidemic, as aforesaid, the State Veterinarian * * * shall order the slaughter of diseased animals thereon."

This has reference solely to districts or localities proclaimed by the Governor to be infected with the disease. In such districts it becomes your duty to order slaughtered ALL animals diseased, without further ceremony, except finding the fact that they are diseased animals and within the district described in the proclamation, and of course, complying with the other provisions of the law concerning appraisement, etc.

But this section further provides: "And in cases of glanders among horses, he shall, as hereinafter provided, order the slaughter of all horses upon the premises which may have been exposed to the contagion; but before doing so, he shall call in consultation with him two reputable veterinarians or practicing physicians," etc. This is a complete sentence, and gives complete power in itself, independent of any other authority in the act. It, in substance, declares that the State Veterinarian shall, in cases of glanders among horses, order slaughtered all horses exposed to contagion, whether they are in an infected district or

not, or whether an epidemic exists or not, or independent of the fact whether the Governor has issued a proclamation or not. But in all such cases, the State Veterinarian must be backed by the order of at least one of the two persons called by him in consultation. This clause of the section, however, has reference only to animals that have been EXPOSED to contagion, not to those actually diseased. The latter clause of the section declares that the State Veterinarian "shall not order the slaughter of any animals NOT ACTUALLY diseased without a written order signed by one or both of said veterinarians," etc.

Applying the ordinary rule of statutory construction to this clause, viz: *inclusio nunis, exclusio alterius*, the clause would read: the State Veterinarian may order the slaughter of animals actually diseased, but not those merely exposed, without the order, etc. In construing statutes, also, every word and phrase must be given some value, as it cannot be presumed that the Legislature used unnecessary or unmeaning words in a law. Therefore, no other meaning can be given these words "shall not order the slaughter of animals not actually diseased without," etc., except that he MAY order their slaughter, if actually diseased, without an order, etc. I am therefore of the opinion that the State Veterinarian may order slaughtered all animals named in the law of 1883, viz: horses, mules and asses that are in fact diseased with the glanders, of his own motion, and that he may order slaughtered all animals exposed to contagion from said disease, if ordered to do so by one or both of the reputable veterinarians or practicing physicians whom he may call into consultation with him. On the next question submitted by you, as to when it is necessary to call upon the two reputable veterinarians or practicing physicians, I may add that, it is not necessary, in any case, except when you may deem it advisable to order slaughtered, animals exposed but not actually diseased.

This law and the amendment thereto is an effort on the part of the Legislature to put in force the police power of the State, to prevent the spread of pleuro-pneumonia among the cattle of the State, and glanders among the horses, and no one can doubt that it was high time that this should be done, when we learn that the markets of Europe have been closed to our cattle, be-

cause of the one disease, and that two men have died in White-side county because of the other. Under these circumstances private rights should give way before the public good, as it often becomes necessary to tear down or blow up private buildings before a fire, that a city may be saved.

Sec. 5 of the act of 1881 gives an ample remedy if you are in any way interfered with in the performance of your duty. It provides that, "if any person or persons shall wilfully or maliciously obstruct or resist the State Veterinarian in the discharge of his duty, as hereinbefore set forth, shall be deemed guilty of a misdemeanor, and upon conviction of either charge, shall be fined," not less than \$50, nor more than \$500 for each offence. It becomes the duty of every officer of the State to enforce this law, and if you are obstructed or interfered with in any way, in the performance of your duties under this law, you should at once report the fact to the State's Attorney of the county in which the obstruction or resistance is made, who will institute proceedings to enforce the penalties provided.

Public policy and the public good requires the careful extermination of all dangerous, contagious, or infectious diseases, and no good citizen will obstruct or interfere with officers who are acting alone for the public benefit, even if in some cases, necessarily, private property may be destroyed.

I have herein discussed the questions involved so exhaustively, because the law is a new one, and in the hope that those persons disposed to resist its enforcement, may be enabled to see both sides of the question, and cease their opposition.

Very truly yours,

JAMES McCARTNEY,

Attorney-General.

NEWS AND SUNDRIES.

HOG CHOLERA.—Hog cholera is again reported from Pennsylvania.

PREVALENCE OF PLEURO-PNEUMONIA.—L. McLean is reported to have said that eight per cent. of cattle on Long Island are affected with this malady. He recommends inoculation.

GLANDERS.—Glanders among horses is being found in many of our large stables. It exists in Illinois, Newark, N. J., Brooklyn, and no doubt in many stables where its existence is denied.

TEXAS FEVER.—Several cases of Texas fever having been discovered among Texas cattle brought to Worcester, Mass., it is stated that the Board of Cattle Commissioners will issue an order forbidding the bringing of any more of these cattle into Massachusetts.—*Am. Cultivator*.

GLANDERS.—The State Veterinarian of Illinois seems to be vigorously enforcing the glanders act. At Mansfield, Piatt county, he last week had four horses shot and burned, together with harness, etc. The diseased horses were appraised at \$85.—*Prairie Farmer*.

RABBITS CARRYING CONTAGION.—Do jack rabbits carry scab from one range to another? It is said they do. A Colorado man writes: Thinking it might be of value to owners of sheep, I will state something which has come under my observation during the past five months. In riding on the plains I often take my gun. At different times I have shot jack rabbits, and whenever they are near sheep ranges they invariably have the scab. I am well satisfied they carry it from one range to another. A small premium offered would exterminate them, and save much damage to the sheep industry.—*Journal of Agriculture and Farmer*.

ITCH IN THE CAT.—A correspondent of the *British Medical Journal*, Dr. John Reid, writes as follows regarding a case of "acarus" in a cat: "The cat in question, when seen for the first time (it being a stray cat), was greatly emaciated, and died on the following night (January 5, 1883). The hair on one side of the face and neck, including the ear, was matted so as to resemble one large scab. The itch-insect and eggs were detected in large numbers. The cat's liver contained many abscesses of the size of a pin's head; the lungs, etc., appeared to be normal. Does the cat infect children, etc.? do these infect the cat? or is there mutual infection?"

♣ **THE TRICHINÆ IN CHICAGO PORK.**—In the present agitation over trichinous pork and adulterated lard, the investigations made some years ago by Dr. W. T. Belfield and Mr. H. F. Atwood, of

Chicago, may be cited. They examined the pork in the various packing-houses of that city, and found trichinæ present in eight per cent. of the specimens, the parasites averaging about 20,000 to the cubic inch. These gentlemen believe that infection of human beings with trichinæ is very much more common and less injurious than is commonly supposed. They have made the interesting discovery that a small portion of sulphurous acid dissolved in the brine in which hams are pickled will kill all the trichinæ.

SUDDEN DEATH AT THE BEGINNING OF CHLOROFORM INHALATION.—Dr. Janovitsch Tschainsky relates in *Medizinski Westnik*, Nos. 12 and 13, 1883, the case of a peasant, twenty-eight years of age, upon whom he was about to operate for the removal of a lupoid growth from the under lip. Hardly had the patient taken two whiffs of chloroform when respiration ceased and he was dead. The necropsy revealed fatty degeneration of the wall of the right ventricle, while that of the left appeared to be normal. The reporter attributed the death to psychic causes, the dread of the operation. He relates several similar cases, among which was that of Cazenave. In this case the surgeon desired to operate upon a very nervous patient without chloroform, and in order to deceive him held a bag of pure air before his mouth; he breathed four times and died. Desault, being about to cut for stone, drew his finger-nail across the perineum to indicate the line of incision. The patient in his alarm gave a shriek and died.

INFECTION THROUGH MILK.—About three-quarters of a mile from Bacton Manor in Herefordshire, is a wretched little building known among the country-folk as "The Mill." The people of this mill keep two cows, and by them the Union is supplied with milk. A short time ago one of the mill children took scarlet fever, and soon afterwards it spread to the Union, which is at some distance from the "Mill," seven out of the thirty children inmates being almost simultaneously attacked. The infection has since been traced to the milk-supply. Milk has been so often shown to be a vehicle of zymotic infection, that it is a wonder how any one can yet be ignorant of the fact. Yet the mischief here was due to ignorance on the part of the miller, for it seems that he made no secret of the existence of the fever in his house, and he daily took the milk to the Union in person.—*London Herald of Health.*

GLANDERED CATTLE.—A singular case was lately tried in an English court. An officer of the society for the prevention of cruelty to animals, at Wolverhampton, had a couple of beeves, a cow and an ox, killed as unfit for human consumption because of a peculiar disease with which both were afflicted. At the trial to fix damages, Dr. J. Woodroffe Hill, F.R.C.V.S., testified that, in his opinion, the disease was glanders. Mr. C. A. Newnham, surgeon, and the magistrate who had condemned the animals, agreed with Mr. Hill. Mr. J. H. Lowe, medical officer of health for the borough, also considered it glanders. Hill said he had been in practice seventeen years, and had never seen a glandered cow until this one, but the disease had been produced in other ruminants, also in poultry and rabbits. Dogs, until recently, were considered exempt, but this year there was overwhelming evidence to the contrary, and so it might be in cattle. He could not tell the period of incubation of glanders in cattle. The defense produced several veterinary surgeons who agreed that a case of glanders in cattle had never been heard of, and that they did not believe it could be produced in them. Prof. Pritchard had attempted to inoculate a cow with glanders, but did not succeed. Prof. Simmons had also tried and failed. The finding was "there was a very strong presumption at present that glanders could not be found in a cow. Therefore, under these circumstances, and finding a difference of opinion in the medical evidence, he could not convict." The testimony for the prosecution is exciting much discussion in veterinary circles in Great Britain. At this time, when glanders is so prevalent in this country, it is a matter of some importance for people to know if cattle are liable to its ravages. The Department of Agriculture hospital, at Washington, will do well to institute a series of experiments in order to demonstrate the truth one way or the other.—*Prairie Farmer*.

FOOT AND MOUTH DISEASE.—Mr. Dodson, Chancellor of the Duchy of Lancaster, stated on the afternoon of August 17, in the House of Commons, in response to an inquiry by Mr. Duckham, that it was an undoubted fact that the foot and mouth disease had been carried from England to America. He said that the Canadian cattle now suffering with the disease at Bristol

had been in contact at Liverpool with infected animals which came from Ireland. He pointed out, however, that the American quarantine system in relation to cattle diseases gave no security against the conveyance of disease by men attached to the quarantine stations and by articles taken out of the quarantine yards. The system, he said, only took into consideration the animals themselves.—*New York Herald*.

VETERINARY HONORS.—Count Ercolani, of the Bologna Veterinary School, has been elected a member of the Superior Council of Public Instruction, by the Faculty of Human and Veterinary Medicine of that University. Professor Vallada, Director of the Milan Veterinary School, has been nominated an Officer of the Crown of Italy.

CATTLE QUARANTINE.—The Secretary of the Treasury has issued a circular giving public notice that neat cattle arriving in the United States from any part of the world, except North and South America, will be subjected to a quarantine of ninety days, counting from the date of shipment. As the Dominion of Canada maintains quarantine for all imported cattle, no quarantine for cattle imported from Canada is provided. Quarantine stations for cattle have been established as follows: At Deering, for Portland, Maine, for about 215 head; at Waltham, for Boston, Mass., for about 300 head; at Garfield, N. J., for New York, for about 350 head, full-grown animals.

THE LATE MISS DICK.—The death at Burntisland on the evening of Saturday last, at the advanced age of 92, of Miss Mary Dick, sister of the late Professor Dick, founder of the Edinburgh Veterinary College, is an event of some public interest, both retrospectively and prospectively. She was intimately associated with her brother in founding and endowing the College, and since his death in 1866, when the management was transferred to the Town Council of Edinburgh, Miss Dick has continued to take the warmest interest in the prosperity of the institution. Under her brother's will, Miss Dick had been constituted residuary legatee, and managed the Burntisland property personally. By her death a large annual revenue from house property and fens will be available for the service of the College,

which henceforth may be expected to be placed on a far more satisfactory basis, and to offer still greater advantages for the cultivation of veterinary science. Miss Dick was born on 1st June 1791, at Whitehorse Close, Edinburgh, where her father, who was a blacksmith, had a forge. Her reminiscences of old Edinburgh were very entertaining. She used to relate that she had been offered the perusal of several of Scott's novels while yet only in MS., but had declined to read them both then and ever afterwards. This is doubtless to be explained by the fact that her political and ecclesiastical proclivities lay from the first in a direction diametrically opposed to those of Sir Walter Scott. At the age of twelve she crossed the Firth in an open boat to Kirkcaldy, paying 2s. for her passage, part of which consisted in being carried from the boat to the landing place on the boatmen's shoulders. Through her brother she enjoyed a very extensive acquaintanceship both at home and abroad, which she kept up to the last, every day posting and receiving a considerable number of newspapers and correspondence bearing mainly on public questions. She was an ardent Liberal, and advocated female suffrage; greatly satirical on modern extravagance and effeminacy; boasting, for example, that she had never taken a walk for health in her life, and that she had never had a cough. Her funeral takes place to-morrow, when her remains will be interred in the Calton Burying-ground, Edinburgh.—*Scotsman* July 17, 1883.

BEQUESTS TO THE DICK VETERINARY COLLEGE AND THE UNIVERSITY OF EDINBURGH.—Under the will of Miss Mary Dick, sister of the late Professor Dick, founder of the Edinburgh Veterinary College of that name, it is, we understand, provided, after the payment of £100 to the Society for the Benefit of Widows of Veterinary Surgeons and certain other legacies, that the residue of her estate, with the accumulations of the free income to be derived from the same, shall be held by the trustees of the testatrix until it amounts to £20,000, when it shall be divided into two equal portions, £10,000 being applied in the furtherance of veterinary science in connection with the Veterinary College in Clyde Street, and the other £10,000 in the found-

ing of a Professorship, either of comparative anatomy or of surgical anatomy, whichever of these Chairs the trustees shall consider to be most required in the interests of medical science, in the University of Edinburgh, "in memory of the late Dr. John Barclay and the late Professor John Goodchair," the testatrix adding that she was "led to found this Professorship in memory of these gentlemen, in respect of the great regard that my late brother entertained for them, and that they, I believe, entertained for him." While declaring that the period of accumulation shall not exceed twenty-one years from the date of her death, the testatrix provides that in the event of the £20,000 being reached before the expiry of that period, her trustees shall have full power, after making the division, to continue to hold both or either £10,000 for twenty-one years, and until such an amount is accumulated as may be, in the opinion of her trustees, for the most advantageous promotion of the objects contemplated. In a codicil to her will the testatrix states that she had erected certain houses at the Kirkton, Burntisland, on the property belonging to her brother's trustees, and life-rented by her at a total cost of £800; but she had not then got any title to the ground on which the houses were built; and, in the event of her death before getting such title, and the same thus falling to her late brother's trustees, the sum of £800 more shall be employed by her trustees in the furtherance of comparative anatomy and surgery than in the furtherance of veterinary science. Of the trustees under the will, Professor Turner, Professor Cliene, and Professor M'Kendrick (Glasgow) are declared by the testatrix to have been appointed "in consequence of their special qualifications to carry out" her wishes "in regard to the disposal of the residue" of her estate.—*Scotsman*, August 7, 1883.

EXCHANGES, ETC., RECEIVED.

FOREIGN.—Archiv für Wissenschaftliche und Practische Thierheilkunde, Revue für Thierheilkunde and Thierzucht, Clinica Veterinaria, Recueil de Médecine Veterinaire, Archives Veterinarias, Presse Veterinaire, Annales de Belgique, Veterinary Journal, Veterinarian, Gazette Medicale.

HOME.—Prairie Farmer, Rural New Yorker, National Live Stock Journal, Breeders' Gazette, Medical Record, American Cultivator, etc.

JOURNALS.—Farm Journal, Home Farm, Western Farm, Iowa Farmer.

PAMPHLETS.—Enseignement en Médecine Veterinaire, ce qu'il est, ce qu'il devrait être (Teaching in Veterinary Medicine, what it is and what it ought to be). Twenty-sixth Report to the Maine Board of Agriculture.

COMMUNICATIONS.—A. A. Holcombe, N. H. Paaren, W. H. Pendry, J. A. Nyers, T. E. White, W. R. Howe, Geo. H. Bailey, Julius Gerth, A. J. Murray, Thos. Walley.

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